

Impact of the Polio Eradication Initiative on Donor Contributions to Routine Immunization

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The opinions stated in this document are solely those of the authors and do not necessarily reflect the views of USAID.

Abstract

While the polio eradication initiative has been highly successful in lowering the number of polio cases worldwide, questions have arisen about the impact of the initiative on the functioning and financing of health systems as a whole and routine immunization more specifically. While some studies have investigated the impact of polio eradication on the functioning of health systems, few have been able to examine the impact on financing.

This study is the second conducted by the United States Agency for International Development's Partnerships for Health Reform Project on the impact of the polio eradication initiative on the financing of routine immunization activities. The first study examined funding trends for polio eradication and routine immunization in three countries: Bangladesh, Côte d'Ivoire, and Morocco. This study looks at funding trends among international organizations and donors, and the impact that their funding of polio eradication activities has had on their funding of routine immunization activities.

The study findings indicate that while some short-term decreases in donor funding for routine immunization appear to have taken place as polio eradication initiative activities were introduced and accelerated, on the whole, donor funding for routine immunization support does not appear to have decreased.

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Acronyms

| | |
|---------------|--|
| AusAID | Australian Agency for International Development |
| CDC | U.S. Centers for Disease Control and Prevention |
| CIDA | Canadian International Development Agency |
| DANIDA | Danish Agency for Development Assistance |
| DFID | Department for International Financing |
| EPI | Expanded Program on Immunizations |
| EU/FED | European Union Development Fund |
| GAVI | Global Alliance for Vaccines and Immunization |
| KFW | <i>Kreditanstalt fuer Wiederaufbau</i> (German development agency) |
| MOH | Ministry of Health |
| NORAD | Norwegian Agency for International Development |
| PAHO | Pan American Health Organization |
| PEI | Polio Eradication Initiative |
| PHR | Partnerships for Health Reform |
| SIDA | Swedish International Development Agency |
| UNF | U.N. Foundation |
| UNICEF | United Nations Children's Fund |
| USAID | United States Agency for International Development |
| WHO | World Health Organization |

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Executive Summary

Considerable controversy exists about whether the polio eradication initiative (PEI), led by the World Health Organization (WHO), UNICEF, and a number of bilateral donor agencies, has had positive or negative effects on longer-term health sector activities. Two new sets of studies have been carried out by WHO and UNICEF to assess the impact of the PEI on health systems in African and Asian countries. These studies have had difficulties obtaining information about the impact of the initiative on the financing of longer-term health programs.

This study is the second conducted by United States Agency for International Development's Partnerships for Health Reform Project on the impact of the polio eradication initiative on the financing of routine immunization activities. The first study (Levin 2000) examined funding trends for polio eradication and routine immunization in three countries: Bangladesh, Côte d'Ivoire, and Morocco. In this study, the analysis focuses on funding trends among international organizations and donors. Its purpose is to determine the impact of donor funding of PEI activities on donor and international organization funding of routine immunization activities.

Methods

The effect of the PEI on donor and international organization financing of routine immunization activities is analyzed in two dimensions: 1) short-term effects on the funding patterns for routine immunization programs by donor organizations, and 2) long-term effects on trends in funding from those same organizations.

The short-term effects of the PEI on financing of routine immunization are examined using trend analysis. First, the patterns of funding of routine immunization activities by specific donors and international organizations are examined and compared with funding for polio eradication activities to determine whether a change in the rate of funding for routine immunization, or the change in the rate of increase of its funding has occurred since polio eradication activities were introduced.

Second, long-term financing possibilities are discussed in terms of impact of types of funding as well as use of funds mobilized by polio eradication after the PEI has been completed.

Data Collection

The data collection was conducted primarily through email and via phone calls to donor organizations and international organizations during 2000 and 2001. In some cases, visits were also made to organizations to obtain the information. Key persons at these agencies were asked to provide information on the annual contributions and uses of funding on polio eradication and routine immunization. The organizations were also asked to provide information on contributions to specific countries and their uses. Questionnaires were sent to all bilateral donor organizations with contributions to polio eradication (that were greater than US\$2.5 million), one private organization (Rotary International), and major international organizations.

Findings

The findings indicate that while some short-term decreases in donor funding for routine immunization occurred during the introduction and acceleration phases of the PEI, on the whole, donor funding for routine immunization support does not appear to have decreased. The relative stability of routine immunization funds relates to several factors. First, many donors focus on either PEI or routine immunization, often concerning themselves with specific activities in a few target countries. In fact, the two largest donors for PEI never contributed to routine immunization; their monetary support of international immunization activities began with the inception of PEI activities. Second, other donors that have traditionally worked in certain countries supporting routine immunization have continued to do so. Third, some donors are now participating in the sector-wide approach (SWAP) to funding health, pooling their funds and supporting the immunization programs indirectly through this mechanism.

Due to insufficient information from field offices and changes in tracking systems, it was not possible to conduct a trend analysis for the regular resources of WHO and UNICEF. However, donor funding channeled through these two organizations to routine immunization experienced minimal fluctuation during the past decade.

Conclusions

The data available provides no evidence of significant fluctuations in donor funding for routine immunization activities during the 1990s, when coverage rates plateaued and even declined in some countries. The beginning and acceleration of PEI activities was possible largely through the mobilization of new funding sources rather than the redirection of routine immunization funds. Because U.N. organizations provided only incomplete data for their regular resources, no conclusion on funding trends can be made in these specific instances; however, the broader picture shows consistent funding levels for routine immunization activities irrespective of the progression of the PEI.

Since relatively large amounts of donor funding have been mobilized for polio eradication, it is important that program managers and policymakers consider how to keep this funding available for public health interventions and particularly for financing of various immunization activities once the eradication initiative ends.

1. Introduction and Background

1.1 Introduction

The polio eradication initiative (PEI) has been highly successful in lowering the number of polio cases worldwide. However, at the same time, questions have been raised about the impact of the PEI on health systems as a whole and routine immunization more specifically. While some studies have investigated the impact of polio eradication on the functioning of health systems, few have been able to examine its impact on financing. A study on financing is valuable in order to ensure that lessons learned will be available when considering the feasibility of future disease eradication campaigns.

This study is the second one conducted by the United States Agency for International Development's (USAID's) Partnerships for Health Reform (PHR) Project on the impact of the PEI on the financing of routine immunization activities. The first study (Levin 2000) examined funding trends for polio eradication and routine immunization in three countries: Bangladesh, Côte d'Ivoire, and Morocco. This study looks at funding trends among international organizations and donors and the impact that their funding of PEI activities has on their funding of routine immunization activities. Do tradeoffs occur between polio eradication and routine immunization when donors and international organizations fund the PEI? That is, do they reduce their funding for routine immunization activities in order to shift funding to the PEI? Or, are the funding trends for the PEI and routine immunization independent and consistent? The study was carried out in collaboration with the World Health Organization (WHO), which had collected and provided to PHR much of the data on contributions to the PEI.

1.2 Background

The World Health Assembly meeting in 1988 marked the commencement of the polio eradication initiative and, with a prevailing sense of optimism, the goal for global eradication was set for early in the new millennium. In the mid-1990s governments, donors, and international organizations contributed unprecedented funds to the polio initiative, and remarkable achievements in eradication were indeed made by the end of the decade: For example, the Americas and the Western Pacific region were certified as polio-free and, worldwide, total cases were reduced from approximately 350,000 in the late 1980s to 2,837 in 2000.¹ Despite these accomplishments, a rising awareness of new challenges to the polio eradication effort—the need to immunize people in hard-to-reach areas and conflict countries, and to improve surveillance techniques—necessitated continued acceleration of activities, and funding.

Simultaneous with this increase of funding for the PEI, however, was a plateau in routine immunization coverage in some countries and a decline of coverage in others, which sparked a concern for the impact of the PEI on routine immunization². With limited data on the financing

¹ Number of cases tallied as of March 13, 2001.

² Routine immunizations are diphtheria, pertussis, and tetanus; Bacille Guerin-Calmette (tuberculosis); polio; and measles.

mechanisms of the PEI, critics of the campaign began to question whether the additional funds and resources directed to the eradication initiative were diverting funds from existing routine immunization programs. Because the answer to this question has implications for the planning and implementation of future control and eradication initiatives, there is widespread interest in discovering the nature of its impact.

In the mid- to late 1990s, several studies investigated the impact of resource allocation decisions of the polio eradication campaigns on the provision of routine services but findings were variable and at times conflicting. In 1995, a detailed qualitative assessment of polio eradication strategies in six Latin American countries conducted by the Taylor Commission, found both positive and negative effects of PEI on routine immunization programs (Pan American Health Organization [PAHO] 1995). A few years later, the World Health Organization (WHO) commissioned case studies in Tanzania, Nepal, and Laos to test a methodology developed to assess the impact of the eradication campaign on health systems areas (e.g. policy context, organizational capacity, service delivery, training and supervision, social mobilization, infrastructure, and financial and human resource inputs) (Mogedal 2000). Although the findings registered some positive impacts and no diversion of national funds, researchers found that potential synergies were often under-utilized by country governments and their international partners. Improvements in the cold chain and the establishment by the PEI of a basis for services positively impacted routine immunization programs in Laos. However, partnerships and linkages created specifically for PEI were not exploited for other health activities. Researchers concluded that with improved planning, governments and their international partners could avoid most negative impacts and encourage positive outcomes.

In 2000, with support of the Child Survival Division of the USAID Office of Health, the PHR Project carried out a study of Bangladesh, Côte d'Ivoire, and Morocco to find out whether tradeoffs occur when governments, donors, and international organizations provide funding for the polio eradication initiative (Levin 2000). The study results indicated that the Bangladesh routine immunization program was not adversely affected by the start-up of the polio eradication activities. In Côte d'Ivoire, an improved cold chain—a product of PEI contributions—effected a stronger routine immunization program and bolstered other health sector activities. Finally, in Morocco, the study found that the government had increased its contributions to cover the majority of costs for routine immunization and PEI.

The county case studies illustrated a non-competitive and potentially synergistic co-existence of the PEI and routine immunization programs. The study found that the majority of donors and international organizations chose to fund either PEI or routine immunization activities in these countries. In fact, only USAID, WHO, and UNICEF provided funds for both sets of activities. Such specialization of funding prevents competition of funds to a large degree. Even in cases where both programs were funded by the same source, with the exception of UNICEF in Bangladesh, researchers observed no reduction of funding to routine immunization. Therefore, the study concluded that additional resources were mobilized to finance PEI and did not reduce the level of funding available for routine immunization in these three countries. In addition, it saw the potential that these resources may eventually be transferred to routine immunization programs and other long-term health programs after polio has been eradicated.

While the first study focused on contributions to polio eradication and routine immunization in specific countries, it did not answer questions about whether specific donors and international donors had changed their funding trends over the time period. In order to examine this latter issue, PHR, in collaboration with the WHO, which provided of the data on contributions to the PEI, conducted a study of trends in donor and international organization funding of the PEI and routine immunization programs.

2. Objective and Methodology

2.1 Objective

The objective of the study is to examine whether contributions to the polio eradication initiative that were made by donor and multilateral organizations' have affected the size and frequency of their contributions to routine immunization activities. The hypothesis being tested is that, as organizations increase their contribution to polio eradication activities, their contributions to routine immunization support will decrease.

2.2 Methodology

As in the earlier PHR study on the impact of the PEI on the financing of routine immunization programs, the effect of the initiative on donor and international organization financing of routine immunization activities is analyzed in terms of two dimensions: 1) short-term effects on funding of routine immunization programs patterns by donor organizations for, and 2) long-term effects on trends in funding from the donor organizations.

The short-term effects of the PEI on financing of routine immunization are examined using trend analysis. First, the funding patterns of routine immunization activities by specific donors and international organizations are compared with funding for polio eradication activities to determine whether a change in the rate of funding for these activities, or in the rate of increase in funding has occurred since the beginning of polio eradication activities.

Second, long-term financing possibilities are discussed in terms of impact of particular types of funding and the use of funds mobilized by polio eradication after the initiative has reached completion.

2.2.1 Data Collection

The data collection was conducted primarily through email and via phone calls to donor organizations and international organizations during 2000 and 2001. In some cases, visits were also made to organizations to obtain the information. Key persons at these agencies were asked to provide information on the annual contributions and uses of funding for polio eradication and routine immunization. The organizations were also asked to provide information on contributions to specific countries and their uses.

Questionnaires were sent to all bilateral donor organizations that make contributions to polio eradication (greater than US\$2.5 million), one private organization (Rotary International), and major international organizations (see Table 1). The questionnaire is in Annex A.

The response rate can be divided into three categories: response with full information, response with limited information, and no response. The response rates for this study were 72 percent, 5 percent, and 23 percent, respectively.

Table 1. Organizations Contacted for Study

| Donors | International Organizations | Private Organizations |
|---------------------|------------------------------------|------------------------------|
| AusAid | UNICEF | Rotary International |
| Belgian Cooperation | World Health Organization | |
| CDC | World Bank | |
| CIDA | | |
| DANIDA | | |
| DFID | | |
| EU/FED | | |
| Italy | | |
| Japan | | |
| KFW | | |
| Netherlands | | |
| NORAD | | |
| SIDA | | |
| USAID | | |

Note: Full names of donors appear in the Acronym List, p. ix.

2.2.2 Limitations and Constraints

The response rate of the organizations contacted was limited in some cases. Some donors did not respond to the requests for information while others were only able to provide partial information.

One reason for the limited response rate to the questionnaires was the inability of some donors to determine the level of their support to immunization programs. Reasons for this include: 1) they were funding integrated projects that included immunization as one component; 2) while they knew how much was contributed at headquarters' level, they were not always aware of how discretionary funds were allocated at the country level; 3) some donors, particularly European ones, began contributing to countries that were using sector-wide approaches to health, that is, they contributed to pooled funding and were unable to determine the amount of their funding allocated to specific activities; and 4) changes or lack of tracking systems made it difficult to examine funding trends.

It is also important to note that this study did not examine whether donor funding for development programs in general or health interventions other than routine immunization programs changed during this period. Donors were not interviewed to determine the rationale behind the provision of increased funding for polio eradication.

2.2.3 Interpretation of the Results

When interpreting the results, it is important to keep in mind that decision-making regarding the level of contributions to a country program does not always occur externally. Funding patterns may be affected by internal dynamics between donors and a country's ministry of health. During development of plans of action in countries, continuous dialogue takes place between ministries of health and donors with regard to funding.

3. Trends in Donor Contributions

3.1 International Donors

Trends in contributions of three donors—Japan, the Canadian International Development Agency (CIDA), and USAID—are shown in Table 2. The government of Japan has provided relatively large contributions to polio eradication since 1993. During the same period, Japan also has continued to provide a consistent level of funding for routine immunization, with the exception of 1996 when its contribution increased. Its funding has been put to similar use for both routine immunization and PEI: purchases of vaccines, cold chain equipment, and vehicles.

Table 2. Large Donor Contributions to Routine Immunization and Polio Eradication (US\$ millions)

| | Japan | | | | CIDA | | | | USAID | | | |
|------|--------------|---------|------------|---------|--------------|---------|------------|---------|--------------|---------|------------|---------|
| | Routine Imm. | | Polio Erad | | Routine Imm. | | Polio Erad | | Routine Imm. | | Polio Erad | |
| | Amt | % incr. | Amt | % incr. | Amt | % incr. | Amt | % incr. | Amt | % incr. | Amt | % incr. |
| 1990 | 1.53 | NA | | | 9.8 | NA | | | 32.2 | NA | | |
| 1991 | 2.36 | +54% | 0.1 | NA | 6.3 | -35% | | | 37.8 | +17% | | |
| 1992 | 2.68 | +14% | 0.4 | +300% | 8.8 | +40% | | | 51.8 | +37% | | |
| 1993 | 3.33 | +24% | 2.7 | +575% | 11.6 | +32% | | | 67.4 | +30% | | |
| 1994 | 4.06 | +22% | 5.6 | +107% | 12.7 | + 9% | | | 58.9 | -13% | | |
| 1995 | 4.17 | +3% | 15.0 | +168% | 9.8 | -23% | | | 37.5 | -36% | | |
| 1996 | 6.10 | +46% | 25.3 | +69% | 4.7 | -52% | 1.77 | NA | 33.8 | -10% | 20.0 | NA |
| 1997 | 4.12 | -32% | 22.0 | -13% | 2.4 | -49% | 3.33 | +1.6% | 17.7 | -48% | 25.0 | +25% |
| 1998 | 4.32 | +5% | 12.0 | -45% | 11.1 | +363% | 1.33 | -60% | 25.6 | +45% | 26.1 | +4% |
| 1999 | -- | -- | 23.3 | +94% | -- | -- | 4.43 | +233% | 28.1 | +10% | 25.0 | -4% |
| 2000 | -- | -- | 35.4 | +52% | -- | -- | 7.44 | +68% | 34.0 | +21% | 26.5 | +6% |

Note: NA=not applicable; --=not available

While funding for the PEI increased or stayed the same for the two other donors shown in Table 2, CIDA and USAID, some short-term decreases in funding for routine immunization took place during this period. CIDA decreased its funding for routine immunization support during 1996 and 1997. It then increased the level of its funding in 1998. USAID funds also exhibited a short-term decline in 1997 and 1998, during the period when funding was earmarked for polio eradication activities by the U.S. Congress. However, after this period, funding for routine immunization support began increasing again.

The funding by another donor, the British Department for International Development (DFID), is shown in Table 3. As its contributions for PEI increased in 1998 and 1999, the contributions for routine immunization activities appear to have decreased. However, it is likely that the information that was obtained from DFID headquarters gives only part of the picture and the organization is continuing to provide contributions to routine immunization via “pooled funding” in numerous countries; that is, the funds were not designated as support for immunization programs. These contributions were thus not captured as support for routine immunization even though they did help finance the immunization programs. For example, even though DFID is currently paying for vaccines, injection materials, and cold chain for the immunization program in Ghana as part of its “earmarked” pooled donor funding, this funding was not cited as one of its contributions to immunization by DFID headquarters.

Table 3. Donor Funding for Routine Immunization and Polio Eradication by Year (US\$ millions)

| | DFID | | | | The Netherlands | | | KFW | | | |
|------|--------------|-------|------------|-------|-----------------|-------|------------|--------------|--------|------------|------|
| | Routine Imm. | | Polio Erad | | Routine Imm. | | Polio Erad | Routine Imm. | | Polio Erad | |
| | Amt. | % inc | Amt. | % inc | Amt. | % inc | | Amt. | % inc | | |
| 1994 | 5.56 | NA | | | 2.22 | | | | | | |
| 1995 | 5.15 | -7% | 6.20 | NA | 1.36 | -39% | | | | | |
| 1996 | 6.60 | +28% | 0.002 | NA | 2.2 | +62% | | 0.299 | NA | 0.13 | NA |
| 1997 | 12.27 | +86% | 5.6 | +99% | 2.0 | -9% | | 0.307 | +2.7% | 22.0 | NA |
| 1998 | 3.9 | -68% | 13.4 | +139% | 1.7 | -15% | | 0.325 | +5.9% | 11.8 | -47% |
| 1999 | 0.6 | -85% | 36.7 | +174% | 1.8 | -6% | | 5.0 | +1404% | 0 | NA |
| 2000 | -- | -- | 97.27 | 165% | 2.6 | +44% | 50.0 | -- | -- | 12.6 | NA |

Note: NA=not applicable, --=not available

The funding trends for another donor shown in Table 3, the Netherlands, indicate that most of its funding during this period has gone toward routine immunization programs and not PEI. However, just recently, the Netherlands began to fund polio eradication activities, specifically, polio surveillance, an activity that is likely to provide benefits to the routine immunization program as well.

The third donor shown in Table 3, *Kreditanstalt fuer Wiederaufbau* (KFW), the development agency of the German government, has provided funds for both routine immunization and polio eradication. In Côte d'Ivoire, KFW provided financial resources for the routine immunization program and for the purchase of cold chain equipment, vehicles, motorcycles, and technical assistance. In India, KFW provided funding for the PEI, which has been used to purchase vaccines and cold chain equipment.

Other organizations that fund immunization programs tend to direct their funding either to routine immunization or to polio eradication. Organizations that have tended to favor routine immunization include the EU, French Cooperation, and Belgian Cooperation. Nevertheless, these organizations have provided funding for polio eradication activities on occasion, when the activities take place in the countries where these donors have a strong presence. For example, Belgium has funded polio eradication activities in the Democratic Republic of Congo, and the EU funded a campaign to address a polio outbreak in Albania.

In contrast, other organizations with a historical focus on disease control approaches have chosen to concentrate on polio eradication (e.g., Rotary International, the U.S. Centers for Disease Control and Prevention [CDC]). Rotary International will have provided nearly US\$500 million in funding for the PEI by the end of 2005; it has also provided substantial in-kind contributions of labor and other support. The CDC has provided to date more than US\$300 million for the initiative, and its funding is expected to reach more than US\$500³ million by 2005.

The Swedish International Development Agency (SIDA) as well as a few other donors have chosen to pool their funding in countries that have taken a sector-wide approach and do not track their funding for interventions such as immunization programs.

3.2 The World Bank

International organizations play an important role in financing both routine immunization programs and the PEI. The type of support provided ranges from provision of loans to allocation of funds and procurement assistance.

World Bank funding has frequently taken the form of development loans, including International Development Agency loans, which have a lower rate of repayment. As can be seen in Table 4, the Bank has been a lender for routine immunization programs throughout the past decade. In recent years, the level of lending for immunization programs has increased and probably reflects the World Bank policy of encouraging countries to use its loans for social sector activities such as maternal and child health programs. The dramatic fluctuations in the Bank's lending patterns probably reflect the fact that these are multi-year loans. The World Bank began lending for polio eradication in 1999 and has provided funding for India thus far.

Table 4. World Bank Funding for Routine Immunization and Polio Eradication (US\$ millions)

| | Routine Immunization | | Polio Eradication | |
|------|----------------------|------------|-------------------|------------|
| | Amount | % increase | Amount | % increase |
| 1990 | 1.5 | NA | - | |
| 1991 | 2.9 | 93% | - | |
| 1992 | 7.7 | 234% | - | |
| 1993 | 0 | NA | - | |
| 1994 | 1.9 | NA | - | |
| 1995 | 1.2 | -37% | - | |
| 1996 | 68.1 | 5575% | - | |
| 1997 | 3.1 | -95% | - | |
| 1998 | 31.7 | 922% | - | |
| 1999 | 16.0 | -50% | 65 | |
| 2000 | 214.8 | 1242% | 38 | -42% |

Note: NA-not applicable

³ Some of the funding is used in the United States, while a significant portion is used for vaccine purchase and operational costs in countries.

3.3 U.N. Agencies

Two U.N. agencies, the WHO and UNICEF, play central roles in the coordination and support of both routine immunization and the PEI. The WHO is the lead agency in the PEI, and plays a key role in the coordination of global routine immunization and PEI activities. The WHO has two types of resources—regular resources and voluntary contributions from donors—and provides funding for staff and consultant support, surveillance, planning, meetings, training, and operational costs at both the regional and country levels. While the WHO was able to provide information on the use of the voluntary contributions received from donors, documentation on regular resources provided for routine immunization and polio eradication for the past 10 years was only available in paper form with a detailed country-level breakdown, and was not summarized by year. Time did not allow for the review and summarization of this information.

Table 5 shows the breakdown of voluntary contributions for routine immunization and polio eradication.⁴ While contributions for routine immunization fluctuated during this period, the amounts generally increased. Contributions for polio eradication have steadily increased since 1990, and increased rapidly starting in 1996 as activities accelerated.

Table 5. Use of WHO Voluntary Contributions for Routine Immunization and Polio Eradication (US\$ thousands)

| | Routine Immunization | | Polio Eradication | |
|-----------|----------------------|------------|-------------------|------------|
| | Amount | % Increase | Amount | % Increase |
| 1990–1991 | 13,135 | NA | 1,495 | NA |
| 1992–1993 | 13,262 | 1% | 5,384 | 260% |
| 1994–1995 | 37,258 | 181 | 12,096 | 125% |
| 1996–1997 | 20,678 | -45% | 65,740 | 443% |
| 1998–1999 | 28,573 | 38 | 159,746 | 143% |

Note: Data on voluntary contributions were given for two-year periods.

UNICEF coordinates support for routine immunization and the PEI both through headquarters and in the countries where it works. It also plays a central role in the procurement of vaccines, supplies, cold chain equipment, and other types of equipment and drugs. UNICEF provides this support with the use of both its regular resources and contributions received from donors.

While insufficient information was available from UNICEF to determine the breakdown of their regular resources between routine immunization support and polio eradication,⁵ some data were provided on the use of donor funds channeled through the agency. The use of the funding provided by four organizations—the U.N. Foundation (UNF), USAID, CDC, and Rotary International—is shown

⁴ Funds channelled through international agencies may overlap with other amounts listed from donors.

⁵Two of the reasons for this lack of information about the use of regular information are: 1) coding of use of funding was not disaggregated sufficiently to distinguish uses for immunization activities; and 2) decisions about the use of regular resources are often made at the country and regional levels and are not available at headquarters.

in Table 6. It indicates that the funding from three of the organizations—the U.N. Foundation, CDC, and Rotary International—has been used primarily for polio eradication activities, as is consistent with the priorities of these organizations. The funding that UNICEF received from USAID, on the other hand, has been used for both routine immunization support and polio eradication activities, with fluctuations in both.

Table 6. Use of UNICEF Resources Received from Donors by Year and Source of Finance (US\$ millions)

| | UNF/UNICEF | | USAID/UNICEF | | CDC/UNICEF | | Rotary/UNICEF | |
|------|-------------|------------|--------------|------------|-------------|------------|---------------|------------|
| | Routine Imm | Polio Erad | Routine Imm | Polio Erad | Routine Imm | Polio Erad | Routine Imm | Polio Erad |
| 1994 | | | | | - | 4.1 | - | 21.5 |
| 1995 | | | | | - | 4.1 | - | 6.3 |
| 1996 | | | 1.3 | | - | 16.0 | - | 16.3 |
| 1997 | | | 4.5 | 3.0 | - | 28.0 | - | 5.6 |
| 1998 | | 3.0 | 3.0 | 1.6 | - | 31.0 | - | 4.6 |
| 1999 | 1.45 | 7.3 | 2.8 | 1.5 | - | 35.6 | - | 6.9 |
| 2000 | | 5.0 | 1.7 | 4.2 | - | 101.4 | - | 7.9 |

A new foundation that channels part of its funds through international organizations is the Gates Foundation. This foundation has funded both polio eradication activities⁶ and routine immunization activities such as the Global Alliance on Vaccines and Immunization (GAVI) in the form of large one-time grants (see Table 7). Other of its financing for routine immunization is provided through the Children's Vaccine Project at Path International.

Table 7. Contributions of the Gates Foundation to Routine Immunization and Polio Eradication

| Year | Gates Foundation | |
|------|----------------------|-------------------|
| | Routine Immunization | Polio Eradication |
| 1999 | \$750 | \$50 |

⁶ Gates Foundation funding for polio eradication has been channelled through the U.N. Foundation.

4. Summary and Conclusions

Study findings indicate that while some short-term decreases in donor funding for routine immunization appear to have taken place (in the cases of USAID and CIDA) as PEI activities were introduced and accelerated, on the whole, donor funding for routine immunization activities does not appear to have decreased.

4.1 Short-term Trends in Donor Funding

Several factors increased the likelihood that donor funding of routine immunization programs would not be affected by the increase in funding for PEI activities. First, the two largest funders of polio eradication, Rotary International and CDC,⁷ did not provide funding for routine immunization programs in developing countries prior to PEI, and they have focused their resources exclusively on PEI activities. Second, some donor countries that began providing funding for PEI activities did so in specific countries (e.g., India) or for specific activities (e.g., surveillance) and continued to provide support for routine immunization activities in the countries they were already funding (e.g., KFW in Côte d'Ivoire). Third, donors that shifted their funding from project-specific to sector-wide in specific countries (e.g., DIFD) continued to support routine immunization programs as part of their pooled donor contributions. A few have not chosen to provide additional support to PEI, (e.g., SIDA) while others are funding PEI (e.g., DIFD and the Danish International Development Agency, DANIDA).

4.2 International Organizations

Routine immunization funding from large organizations such as the World Bank and foundations does not appear to have been affected by the introduction of the PEI. In the case of the World Bank, the funding probably has been driven by country requests as well as by the Bank's own policies towards funding activities in the social sector. In the case of foundations, the foundations' priorities are likely to influence the utilization of funds.

4.3 U.N. Organizations

Although it was not possible to review information on the use of the WHO's regular resources, a clearer picture was obtained on its use of donor contributions. Funding received from donors for routine immunization programs was fairly consistent during the 10 years even as the funding for polio eradication greatly increased during this period—no impact of polio eradication funding was found on the funding of routine immunization activities.

It is not possible to fully evaluate the impact of polio eradication on funding of routine immunization programs in UNICEF because information on regular resources and some donors was not available. It is important to note that UNICEF plays a very important role in procurement of

⁷ The CDC provided technical assistance with funding from USAID, but did not contribute its own funding.

commodities for both routine immunization and polio eradication. It also appears that, in some cases, the use of funding received at UNICEF is influenced by the priorities of the donors, particularly those donors that support PEI fairly exclusively. However, the organizations that have been funding both activities (e.g., USAID) have continued to do so. In general, since UNICEF is such a decentralized organization and information on the utilization of discretionary and country-specific resources is lacking, it is difficult to determine whether there has been an impact of polio eradication on financing of routine immunization activities.

4.4 Long-term Implications

Some of the donor contributions that are currently provided for polio eradication should provide long-term benefits to routine immunization programs. Financing of capital goods, such as cold chain equipment, vehicles, and motorbikes, is positively affecting cold chain systems and transport, two important components of immunization programs.

Funding for improvements in acute flaccid paralysis surveillance should ultimately have a positive effect on national surveillance systems as a whole, if an effort is made to ensure that the activities focus on importance of other types of surveillance as well.

Since relatively large amounts of donor funding have been mobilized for polio eradication, it is important that program managers and policymakers consider how to keep this funding available for public health interventions and particularly for financing of various immunization activities once the PEI ends. Although it is impossible to say whether the same levels of funding will be available for other public health initiatives that are now available for the high-profile activity of polio eradication, strategies should be developed to sustain the availability of high levels of funding for cost-effectiveness interventions such as immunizations.

4.5 Areas for Future Research

Areas of research that could be explored in the future include conducting interviews with several key donors to identify factors that affected funding decisions for PEI versus other interventions. It would be useful to identify whether some opportunity costs were incurred if donor funding was used for PEI activities rather than for other improvements to the routine immunization program (e.g. introduction of new vaccine) or for other health interventions.

In addition, a review of development assistance and funding to the health sector as a whole during this period could be conducted. In this way, more information on why the PEI was successful in raising large amounts of funds could be obtained and provide important lessons learned for future initiatives.

4.6 Implications for Improving Tracking Information of Donors

In the process of gathering information for this study, it became clear that some donors and international organizations have inadequate tracking systems for their contributions to health interventions. The importance of this information should not be underestimated, because it enables donors to evaluate the impact of their financial assistance in order to coordinate their contributions, and even to ensure that financing is adequate for various initiatives.

Annex A: Study Questionnaire

- > What were your organization's annual total contributions for polio eradication during the years 1990-2000?
- > What were your organization's annual total contributions for routine immunization programs for the years 1990-2000?
- > Is the funding that is provided for polio eradication and routine activities for specific regions/provinces or is it on a national basis?
- > Are you channeling funding through another organization in specific countries? Are other organizations channeling funding through your agency?
- > How was the funding used for both polio and routine activities? (Attached is a table that gives more detailed descriptions of uses of funds)

Uses of Funds for Polio Eradication Activities

| Categories | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Recurrent Costs | | | | | | | | | | | |
| Vaccines | | | | | | | | | | | |
| Personnel | | | | | | | | | | | |
| Health workers | | | | | | | | | | | |
| Supervisors | | | | | | | | | | | |
| Volunteers | | | | | | | | | | | |
| External technical assistance | | | | | | | | | | | |
| Surveillance personnel | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| Social mobilization and planning | | | | | | | | | | | |
| Surveillance activities | | | | | | | | | | | |
| Communications/ advertising | | | | | | | | | | | |
| Training | | | | | | | | | | | |
| Transportation | | | | | | | | | | | |
| Supplies/stationary | | | | | | | | | | | |
| Cold chain (recurrent) | | | | | | | | | | | |
| Surveillance training | | | | | | | | | | | |
| Other | | | | | | | | | | | |

| | | | | | | | | | | | |
|----------------------|--|--|--|--|--|--|--|--|--|--|--|
| Capital Costs | | | | | | | | | | | |
| Equipment | | | | | | | | | | | |
| Vehicles | | | | | | | | | | | |
| Other | | | | | | | | | | | |

Uses of Funds for Routine Immunization Activities

| Categories | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Recurrent Costs | | | | | | | | | | | |
| Vaccines | | | | | | | | | | | |
| Personnel | | | | | | | | | | | |
| Health workers | | | | | | | | | | | |
| Supervisors | | | | | | | | | | | |
| Volunteers | | | | | | | | | | | |
| External technical assistance | | | | | | | | | | | |
| Surveillance personnel | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| Social mobilization and planning | | | | | | | | | | | |
| Surveillance activities | | | | | | | | | | | |
| Communications/ advertising | | | | | | | | | | | |
| Training | | | | | | | | | | | |
| Transportation | | | | | | | | | | | |
| Supplies/stationary | | | | | | | | | | | |
| Cold chain (recurrent) | | | | | | | | | | | |
| Surveillance training | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| Capital Costs | | | | | | | | | | | |
| Equipment | | | | | | | | | | | |
| Vehicles | | | | | | | | | | | |
| Building | | | | | | | | | | | |
| Other | | | | | | | | | | | |

Annex B: References

Levin, Ann, Sujata Ram, and Miloud Kaddar. 2000. *The Impact of the Polio Eradication Campaign on the Financing of Routine EPI: Findings of Three Case Studies*. Special Initiative Report No. 27. Bethesda, MD: Partnerships for Health Reform, Abt Associates Inc.

Mogedal, Sigrun and Bo Stenson. 2000. *Disease eradication: friend or foe to the health system?* Geneva: World Health Organization Department of Vaccines and Biologicals.

Pan American Health Organization. 1995. *The Impact of the Expanded Program on Immunization and the Polio Eradication Initiative on Health Systems in the Americas*. Final Report of the Taylor Commission. Washington, D.C.